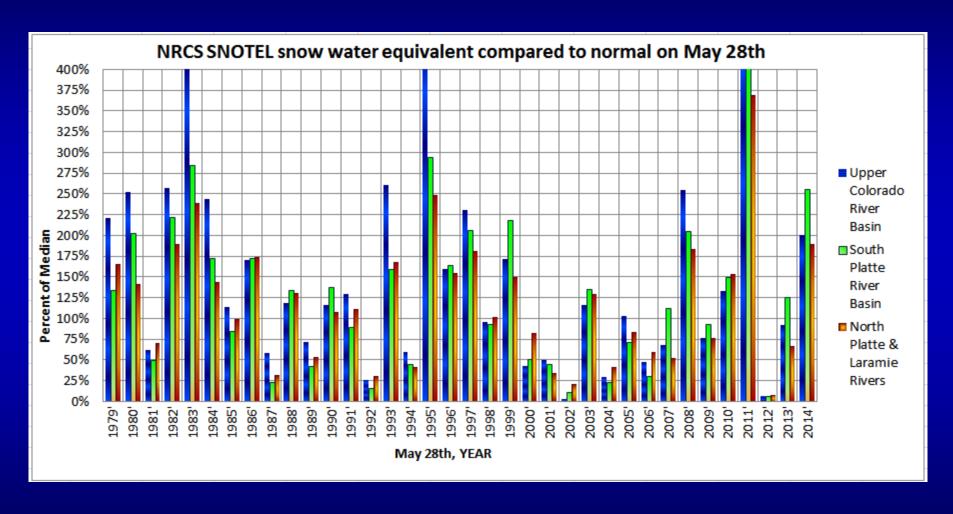
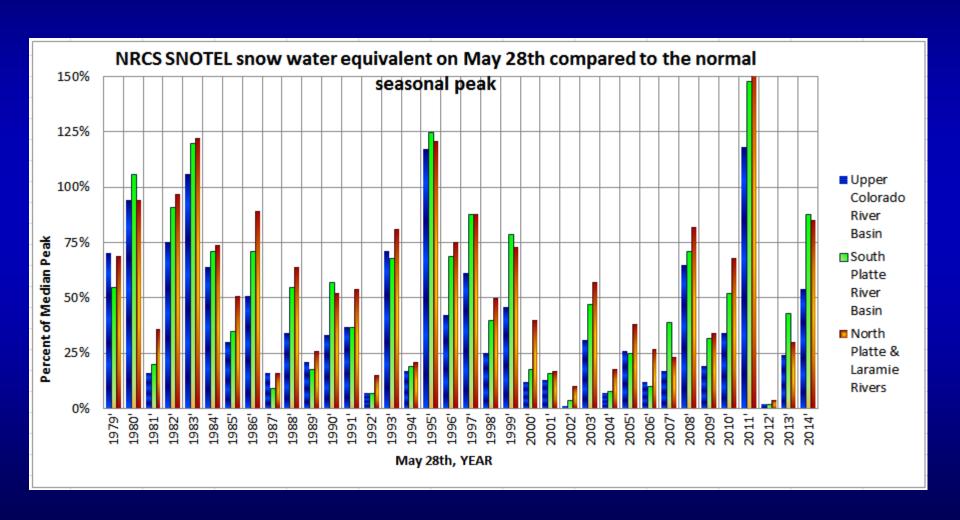
Mountain Snowpack in North Central Colorado

May 28th, 2014

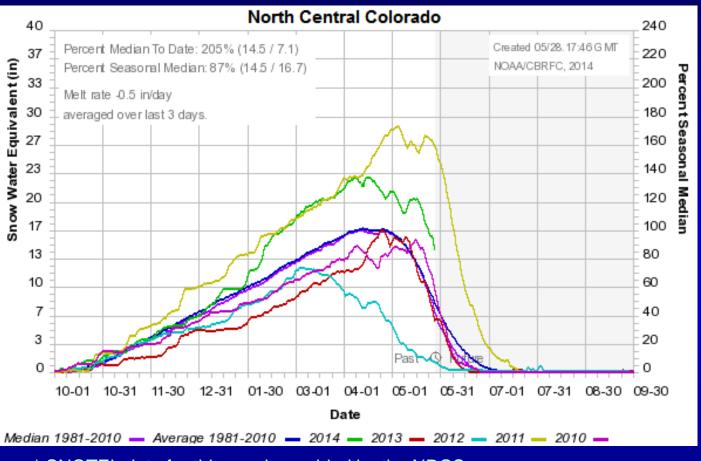
The 2014 percent of normal basin snowpack remains high. By May 28th the percent of normal basin snowpack graph (below) continues to show extremes because it is so late in the season.



The May 28th, 2014 snowpack finally fell below the normal (or median) <u>peak seasonal</u> snowpack values east of the Continental Divide. By late May, the only years with snowpack remaining above the normal seasonal peak (in the past 35 years) was 1983, 1995 and 2011. The basin snowpack this spring is melting at a similar rate as in 1997.



Mountain Snowpack Timeseries Graph through May 28th, 2014 (each line is one of the last 5 years of mountain snowpack)



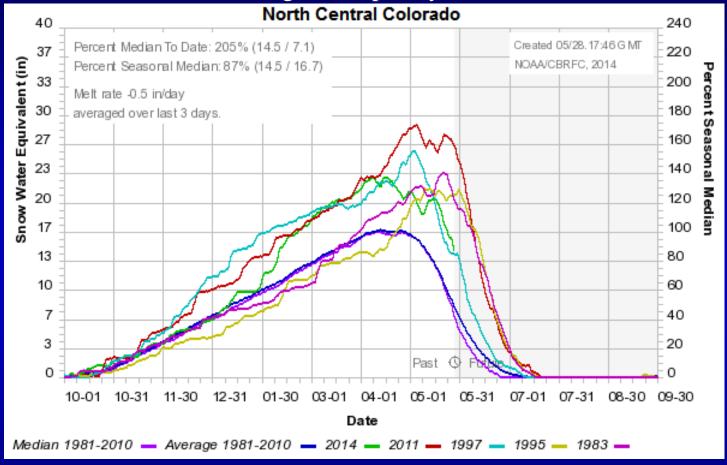
The snow melt out rate has definitely increased the latter half of May.

The green line on the time series graph shows the NRCS SNOTEL SWE (snow water equivalent in the snowpack) from October 2013 through late May 2014. The blue/violet lines show the 1981-2010 average/median.

^{*} SNOTEL data for this graph provided by the NRCS.

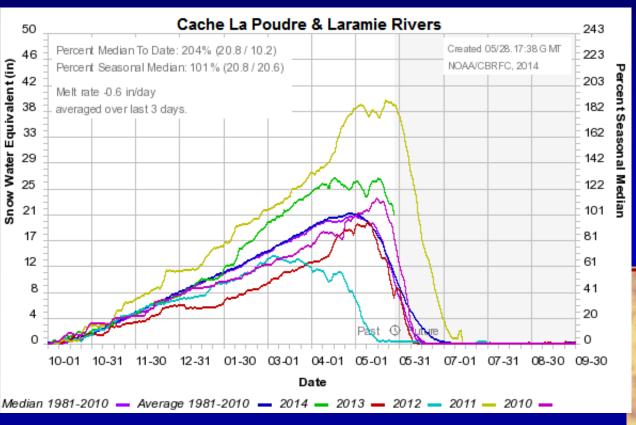
NC CO Mountain Snowpack Timeseries Graph

(5 high snowpack years)

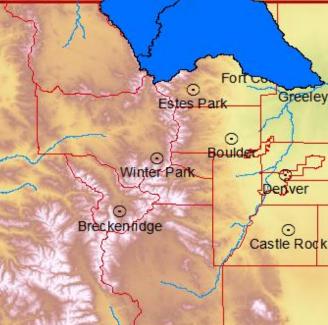


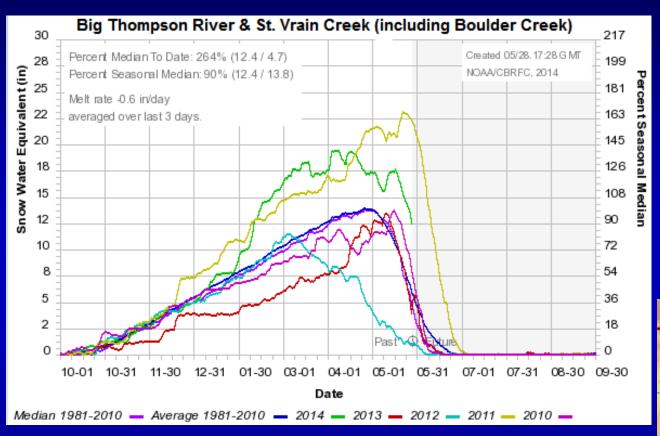
^{*} SNOTEL data for this graph provided by the NRCS.

The past 5 years are displayed for sub-basins on the next 5 slides. The basins are ordered by highest percent of seasonal normal peak first.



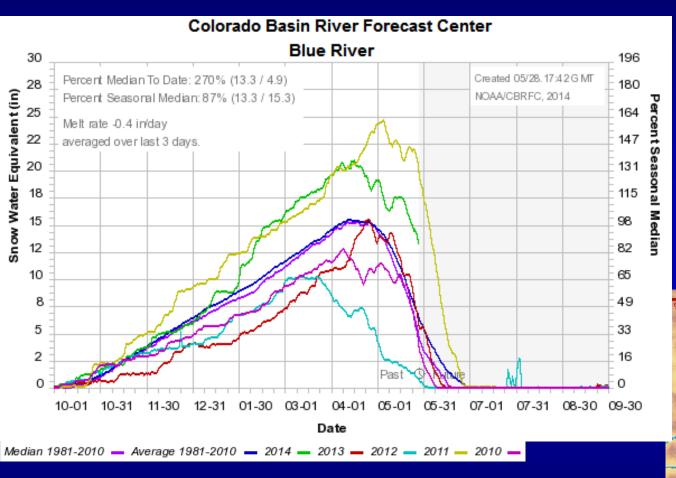
northern Larimer County.





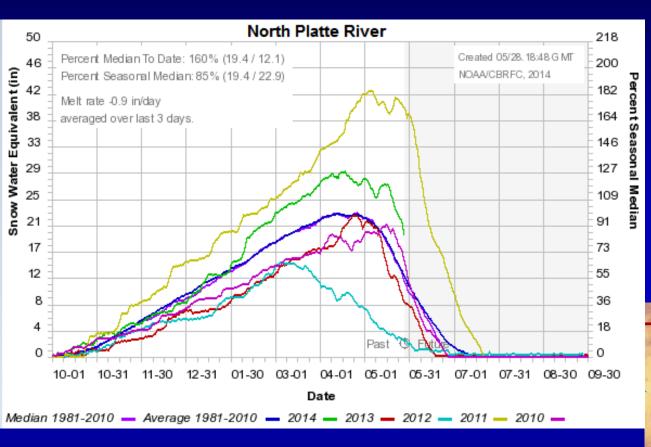
The snowpack in Boulder & southern Larimer Counties remains well above average but below the 2011 snowpack.





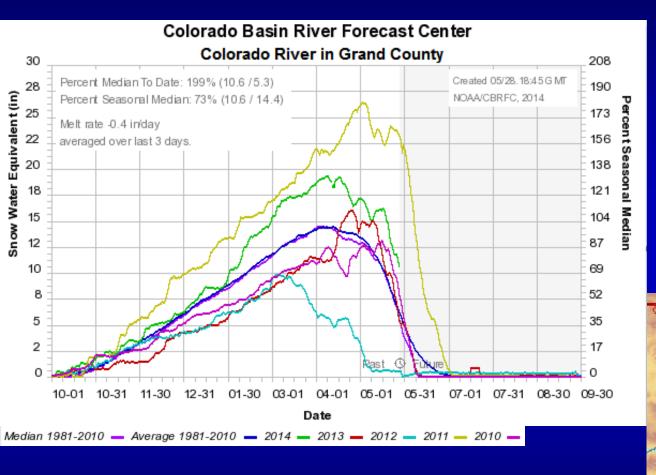
Summit County





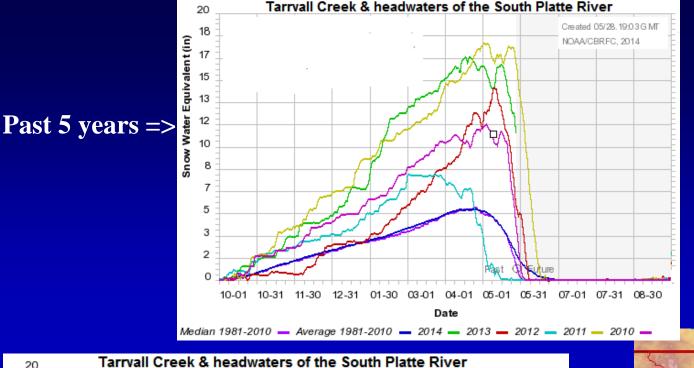
Jackson County.





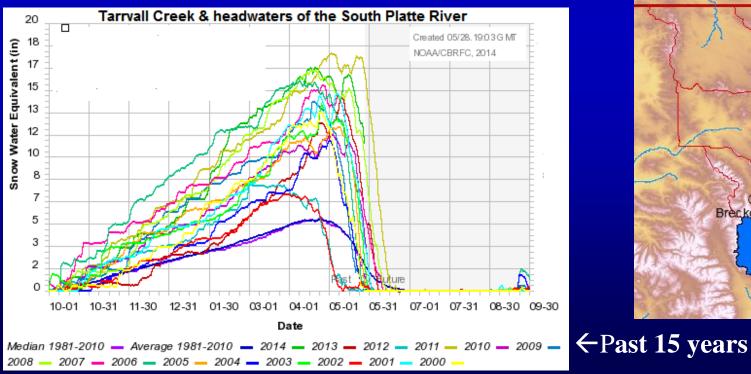
Grand County



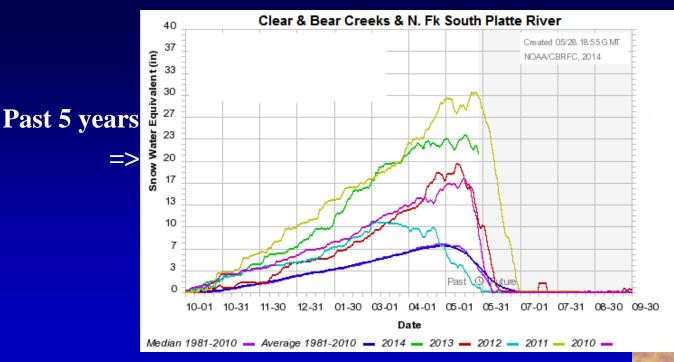


Average/median data was not available for the next 2 slides.

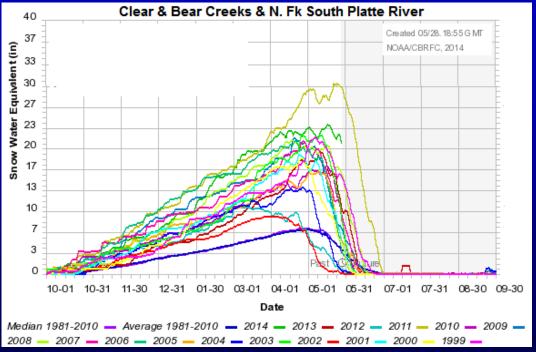
Park County.







Clear, Jefferson & extreme NE Park Counties.

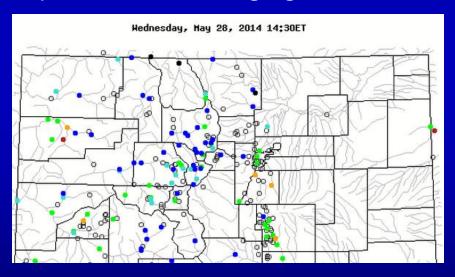




←Past 16 years

Stream Observations and Forecasts:

- The NC & NE Colorado NWS AHPS webpage is available at http://water.weather.gov/ahps2/index.php?wfo=bou. A webpage of NWS current forecast point clickable hydrographs in NC & NE CO is available at http://www.crh.noaa.gov/bou/?n=bou_ahpsmonitor.
- The U.S. Geological Survey Colorado clickable real-time streamflow map is available at: http://waterwatch.usgs.gov/?m=real&r=co



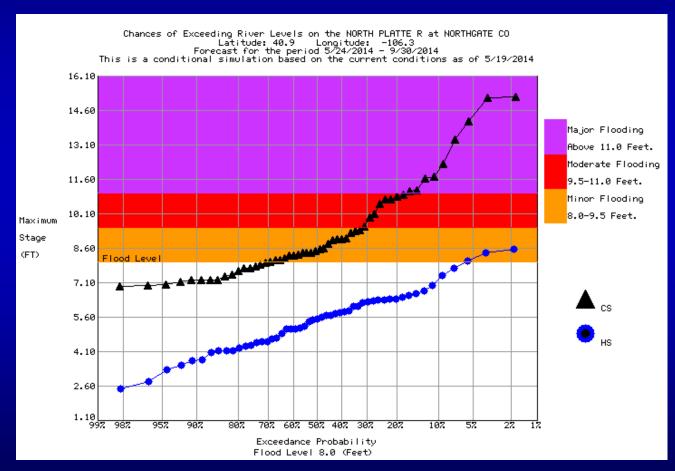
 The Colorado Division of Water Resources surface water data is available at http://www.dwr.state.co.us/SurfaceWater/default.aspx. To go to a basin stream gage table, just click the basin near the top of the webpage. This AHPS probabilistic graph gives the chances of the stage going above various levels during the forecast period (late May through September). The graph shows how the North Platte River at Northgate has a 69% chance of reaching flood stage (8 feet) due to snowmelt runoff. In an 'average' year, the North Platte River at Northgate has a 6% chance of reaching flood stage. It has a 31% chance of moderate flooding this year, compared with less than a 5% chance in an 'average' year.

\triangle_{cs} = Conditional Simulation

• The conditional simulation (CS) line indicates chances of the river going above given levels based on current conditions.

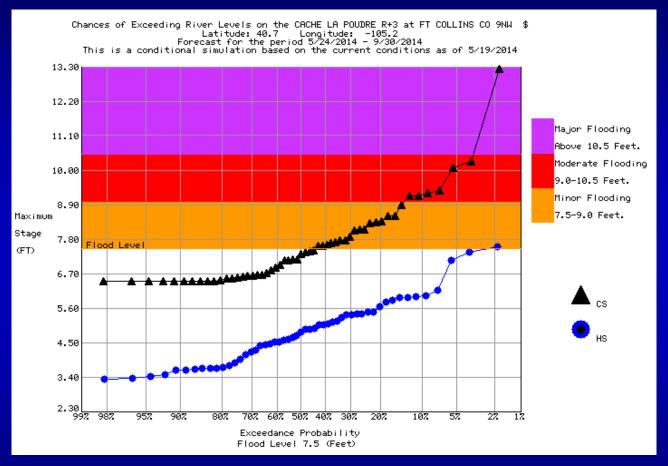
• Historical Simulation

• The historical simulation (HS) line indicates the chances of the river going above given levels based on the total range of past levels.



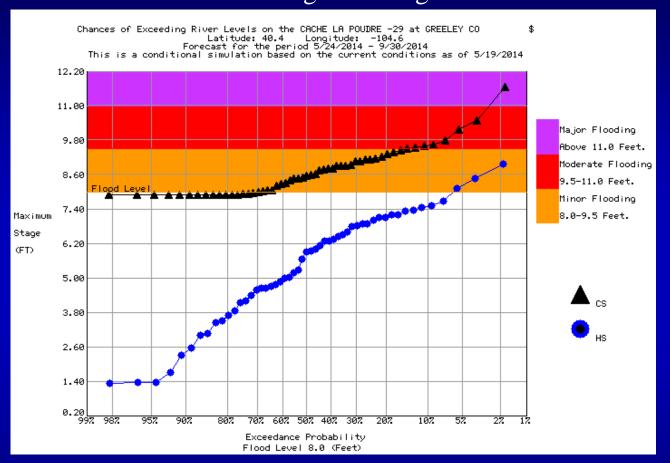
The Northgate forecast point is in northern Jackson County in extreme NC Colorado.

The Cache La Poudre River at the canyon mouth 9 miles northwest of Fort Collins has a 44% chance of reaching flood stage (7.5 feet) due to snowmelt runoff. In an 'average' year, it has less than a 5% chance of reaching flood stage.



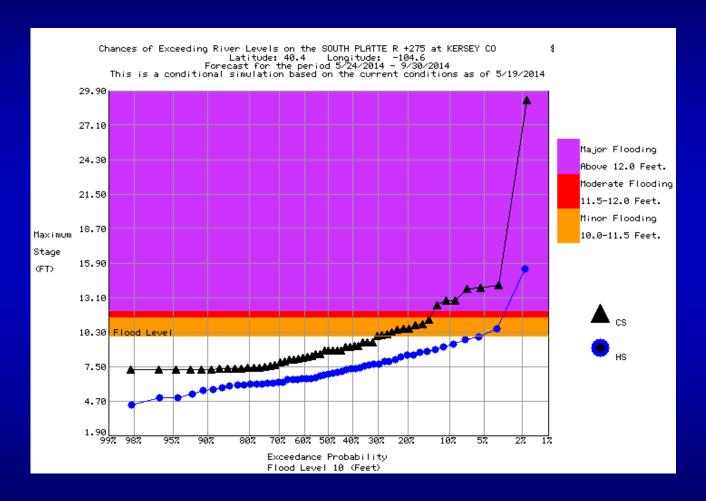
Graphics of probabilistic river outlooks can be found on the AHPS website at http://water.weather.gov/ahps2/. The probabilistic forecast points are marked by circles on the AHPS map. The probabilistic outlook graphics are accessible by clicking the tabs above the forecast point's hydrograph.

Downstream: the Cache La Poudre River near Greeley has a 68% chance of reaching flood stage (8 feet) due to snowmelt runoff. In an 'average' year, it has a 6% chance of reaching flood stage.

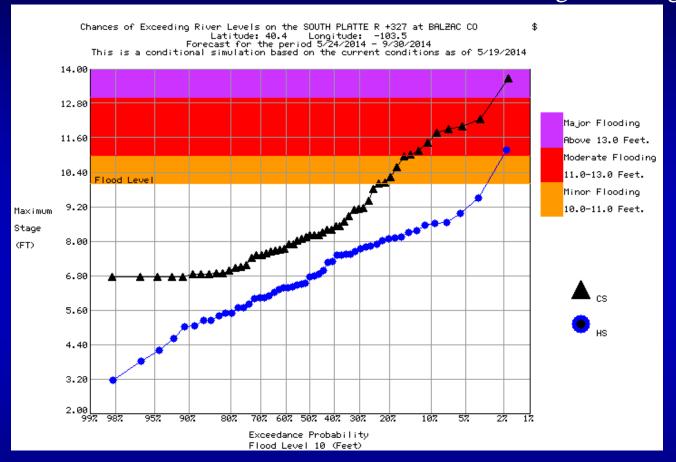


You can also view the weekly chance of exceeding levels graph which give the probability that the maximum stage will exceed a particular value each week through September. These graphs are also available at forecast points marked by circles on the http://water.weather.gov/ahps2/ website on the tabs above the forecast point's hydrograph.

The next forecast point downstream: the South Platte River at Kersey has a 30% chance of reaching flood stage (10 feet) due to snowmelt runoff. In an 'average' year, the South Platte River at Kersey has a 5% chance of reaching flood stage.



Farther downstream: the South Platte River near Balzac has a 23% chance of reaching flood stage (10 feet) due to snowmelt runoff. In an 'average' year, the South Platte River near Balzac has less than a 5% chance of reaching flood stage.

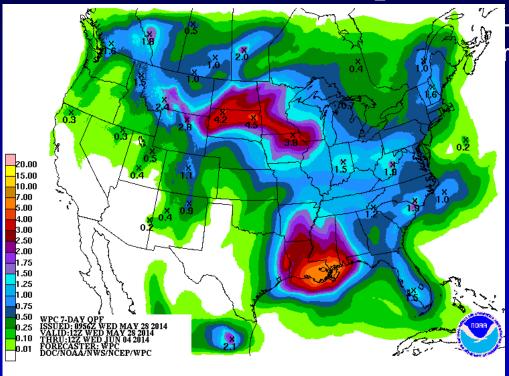


Other probabilistic forecast points (round circles on the AHPS map) in NC & NE Colorado have a 15 percent chance or less of reaching flood stage due to snowmelt runoff alone.

Some Factors than impact runoff:

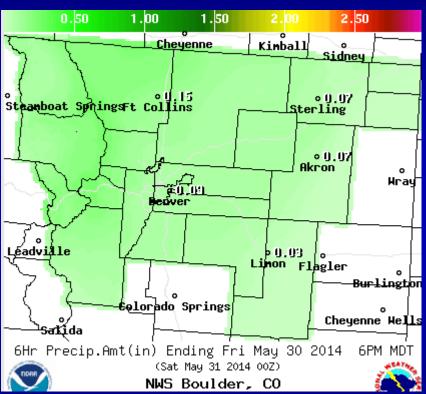
- Future snowfall
- Future rainfall amounts and timing
- Whether rain (especially a warm rain) falls on the snowpack
- When and how fast the snow melts (freezing and thawing in the mountains)
- Stream levels during the melt
- Groundwater/soil moisture
- Dry winds

Precipitation Forecasts:



Click the map above to link to 1-7 day NWS U.S. precipitation forecasts.

Example of 7 day U.S. recipitation forecast.



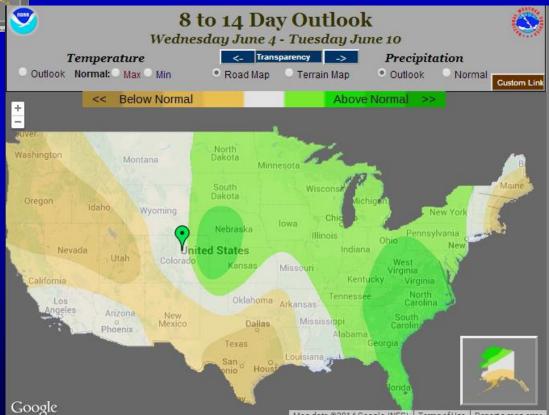
Click the map above to link to the NWS NC & NE Colorado precipitation forecast loop (change forecast element to 'Amount of Precip').

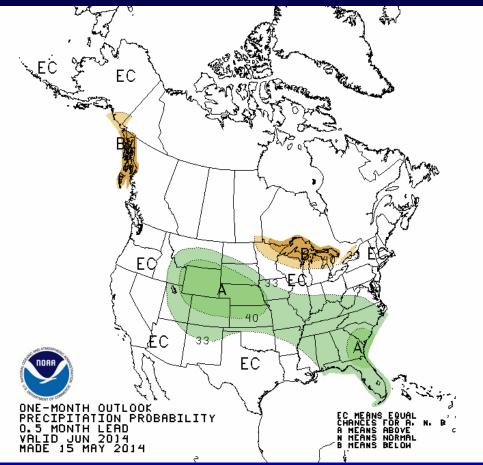
6 to 10 Day Outlook Monday June 2 - Friday June 6 Temperature Precipitation Outlook Normal: Max Min Terrain Map **Custom Link Below Normal** + Normal Precipitation = 0.4 inches Chance of Above Normal Precipitation = 24% Chance of Below Normal Precipitation = 43% Chance of Near Normal Precipitation = 33% Latitude/Longitude = 47.52 -122.96 United States Google

Precipitation & Temperature Outlooks:

Click the map on the top left for the CPC 6 to 10 day outlooks or the map on the bottom right for the 8 to 14 day outlooks.

Click here for more NWS
Climate Prediction Center
(CPC) Outlooks

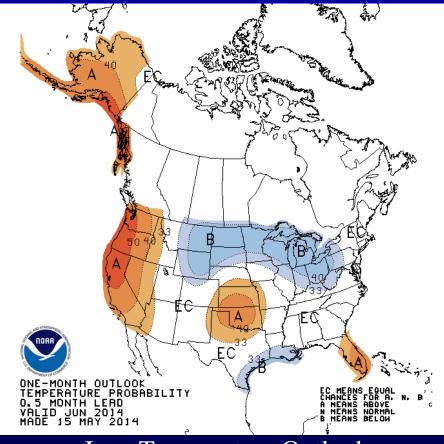




June Precipitation Outlook

Click here for more NWS
Climate Prediction Center
(CPC) Outlooks

The CPC outlook for June calls for above average precipitation.



June Temperature Outlook